H01M 1

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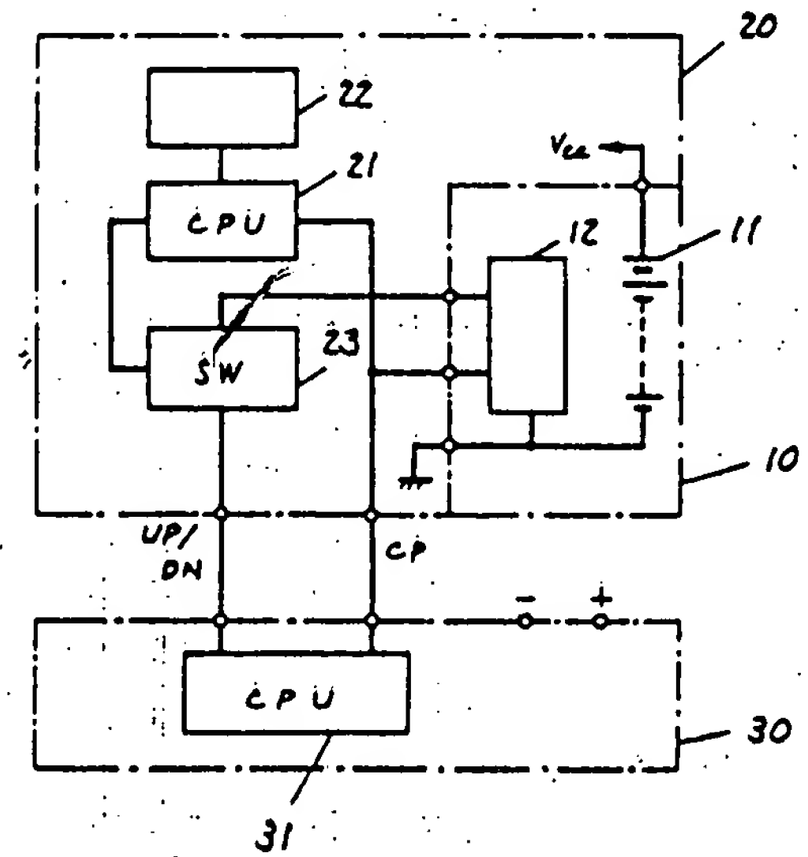
(54) BATTERY RESIDUAL CAPACITY ALARM SYSTEM
(11) 3-163766 (A) (43) 15.7.1991 (19) JP
(21) Appl. No. 64-301724 (22) 20.11.1989
(71) MATSUSHITA ELECTRIC IND CO LTD (72) YOICHI MORINAGA
(51) Int. Cl⁵. H01M10/44,H01M10/42,H01M10/48

PURPOSE: To accurately detect the residual capacity of a secondary battery even if the secondary battery is separated from a portable appliance by installing a means which memorizes the residual capacity of the secondary battery on the secondary battery side.

CONSTITUTION: When a battery pack 10 is connected to a charger 30 and a secondary battery 11 is charged with the charger 30, a CPU 31 of the charger 30 raises an up-down signal UP/DN in a high level and applies clock pulse CP corresponding to the charged amount to a counter 12 of the battery pack 10. The residual capacity of the secondary battery 11 is upcounted. On the other hand, when the battery pack 10 is connected to a portable applinace 20 and power supply voltage V_{cc} is supplied to the circuit of the portable appliance 20 from the secondary battery 11, a CPU 21 of the portable appliance 20 applies clock pulse CP corresponding to the charged amount to the counter 12 of the battery pack 10. Then the residual capacity of the secondary battery 11 is downcontered.



22: display

(54) CONNECTING METHOD FOR BOARD ELECTRODE
(11) 3-163767 (A) (43) 15.7.1991 (19) JP
(21) Appl. No. 64-300795 (22) 21.11.1989
(71) CASIO COMPUT CO LTD (72) SHINOBU SUMI
(51) Int. Cl⁵. H01R13/03,G09F9/00,H01R3/08,H01R9/09,H01R43/00

PURPOSE: To facilitate the connection of board electrodes applied when the